



Dr. Hocking checks the settling progress of chemically-treated sludge.

SLUDGE CONQUEST SEEN

Dr. Martin Hocking (Chemistry) is hopeful he can break down a perverse sludge which is holding back development of Alberta's oil rich Athabasca Tar Sands.

Dr. Hocking said the Great Canadian Oil Sands, Ltd. plant, which is the only operation on the sands, has created a constantly expanding sea of sludge waste from what has been a small-scale bitumen extraction process since 1966.

The sludge, which is "too thick to swim in and too thin to walk on", has defied a variety of attempts to break it down economically so it can be reclaimed for plant and tree growth.

As a result, he said, the Alberta Energy Conservation Board has been sitting on mining applications by other oil companies until this "real headache" has been eradicated.

Dr. Hocking, who has been working independently on the project since January, said his preliminary research is encouraging. "We have high hopes".

Many others across Canada are also working on the problem, including Environment Canada and the oil companies which are seeking application for development.

The sludge, or "bitumen clay water suspension" as Dr. Hocking calls it, is the waste that is created when hot water is mixed with the sand to extract the bitumen. This waste consists of 20 per cent clay, 2 per cent bitumen and nearly 80 per cent water. The problem is to get the clay out of the water and to make it solid soil again.

Dr. Hocking said this injection of water into the sands produces a far greater volume of waste than the volume of tar sand mined, which means much excess remains above ground once the mining holes have been filled or reclaimed.

With the plant's daily output now at 60,000 barrels of oil, the sludge waste is being put into a vast, unsightly pond which has sand walls 200 feet high, 30 feet thick

and which are several miles around — "just miles and miles of muck". And this sludge is known to stay the way it is for up to 30 years before it starts to settle naturally.

Dr. Hocking said the present marginal output by Great Canadian Oil Sands is expected to increase to 600,000 barrels a day by 1980 after the other oil companies start production. This, of course, would greatly increase the sludge plight, which is something Environment Canada and the Alberta Energy Conservation Board don't want to see until a way can be found of leaving the landscape much the same as it was before it was mined.

Dr. Hocking has been using a variety of chemical techniques on sludge samples. So far at least two techniques seem to be separating water from clay, though it is too early to draw conclusions.

He is being assisted by Graham Lee, a graduate chemist from the University of Waterloo who has been hired for the summer under the B.C. Department of Labor's "Industry Initiative 74" programme.

MANY OUT OF SHAPE

Many are physically unfit within the working ranks of the University of Victoria and the Provincial Government.

That is the preliminary indication of an exhaustive fitness test being given to 1,000 civil and university workers in the past two weeks at Lansdowne Junior High School.

The tests show "no great shakes for physical fitness", said Dr. Linton Kulak, M.D., one of the project directors.

The main purpose of the tests, which are being carried out by UVic's Physical Education Department and the Provincial Department of Health, is to validate a questionnaire which may be distributed nationally as a quick and sure way of screening out persons who may be at risk if they undertake vigorous activity.

But for the persons going through a battery of examinations, the project has become a revelation of exactly what shape their bodies are in.

"It is fantastic the amount of interest they are showing," said Dr. Martin Collis, Test Programme Director.

Beginning with a medical examination, the tests take about two hours. They consist of a lung test, body fat measurement, a resting electrocardiogram (ECG), and, finally, if no risk is indicated, a work-out

on a bicycle ergometer monitored by electrocardiographic equipment.

Almost as soon as the tests are completed, the participant receives his results from a counsellor, who explains them and then advises that person on how he may improve his fitness without going overboard. The participant also receives a health evaluation kit which contains a directory of sports and activity organizations within Greater Victoria.

As a follow-up, participants will be notified of blood tests to be taken between August 20 and September 13. A summary of all pertinent results will be forwarded to each participant's physician, and be kept on record at the Provincial Government Occupational Health Unit, where a further appraisal can be received along with a few more tests, such as on hearing in the case of

a person who is exposed to excessive noise.

The health readiness questionnaire was developed by the Health Department's Multidisciplinary Advisory Board on Exercise (MABE) in an attempt to find a simple, inexpensive method for determining those few persons who probably should have a medical evaluation and exercise test prior to increasing their physical activities.

The tests have been carried out by a staff of more than 40, including seven physicians, ECG technicians, and members of UVic's Physical Education and Biology Departments.

The other project director is Dr. David Chisholm, M.D. Final results will be correlated by chief data analyst, Dr. William Davenport of the University of British Columbia.

As these men pump ergometer bicycles, their pumping hearts are surveyed on electrocardiographic equipment.





These are the persons who will be supervising the Faculty of Education's Teacher Internship Programme. Top row, from left, are Ellen Pearce, who will be field officer in Prince Rupert, Skeena-Cassiar, and Kitimat; George Walt, Port Alberni; Bruce Mitchell, Prince George; Alan Maxwell, North Vancouver; Don Daloise, Cranbrook, Kimberley and Fernie; Bruce Andrews, Programme Director; and Dr. Richard Pearce, Assistant Programme Director, who will also be responsible for Nanaimo. Front row, from left: Gerry Clare, Dawson Creek; Frank Koop, Fort St. John; Art Adye, Courtenay; and Tom Hutchison, Fraser Valley.

INTERN ORIENTATION

The Faculty of Education's 10 field officers who will supervise the teaching this winter of 104 intern students are completing a two-week orientation course on campus.

Bruce Andrews, Director of the Teacher Internship Programme, said the officers, who are all experienced teachers, have been meeting staff and their future charges to work out their roles in a programme which could lead to revolutionary changes in teacher training in B.C.

"It's all a new experience for us," Mr. Andrews said.

Each officer will be responsible for helping develop the teaching skills of the interns who will be in his or her region or school district. They will also report back to the Faculty of Education and will eventually decide whether an intern will receive certification after a year of part-time teaching.

One problem in working out the roles of the officers is "if they have to evaluate the work of the interns and at the same time be their counsellors, they are concerned they can't do one and be the other," Mr. Andrews said.

Although the Teacher Internship Programme was set up in conjunction with the Department of Education to meet a predicted teacher shortage in the province this winter, its real significance is to pioneer a system where all education students might be out in the field in the winter and on campus in the summer.

Mr. Andrews said this will mean a network of field officers will then have to be

developed to supervise all the students out in the field.

Whether this happens will be determined when the pilot programme is reviewed by the Faculty and the Department of Education in the spring.

The 10 officers, who were hired from among 82 applications from teachers within the school districts affected, have also been made familiar with UVic facilities and with the over-all structure of the Faculty of Education.

Now that the interns are completing their four months of intensive study on campus, Mr. Andrews is preparing for a busy winter which will see him out in the field for 20 weeks maintaining contact with the field officers.

The interns are all mature students, from a wide variety of occupations, and with a solid academic background in an assortment of disciplines, from marine biology to biochemistry. They range in age from 25 to 55.

The music of the Middle Ages and the Renaissance was pulsating in and around the MacLaurin Building all of last week when the University of Victoria's annual Early Music Workshop was held. More than 130 musicians from all over North America in large and small groups, in hallways, courtyards and under trees were playing with great zest. This recorder ensemble consists of, from the left, Jim Glenn, Billings, Montana, Alvin Roper, Oakland, California, Mario Espin, Victoria, and Geoff Suddaby, Salmon Arm.



CAMPUS SURVIVAL HELP

A small pocket of 46 students will have a big jump over hundreds of others in coping with their first year at the University of Victoria.

They have registered for UVic's annual Transition Programme August 19 to 30 under Dr. R.S. Martin, Director of the Reading and Study Skills Centre.

The course, which will be held from 9 a.m. to noon each day, provides instruction in reading and study skills, and in the use of the library.

"Another important thing is that these students feel like campus veterans by the time the rush and confusion of registration begins in September," Dr. Martin said.

As a must for survival in university, these students are taught how to increase their reading speed, their mental flexibility and comprehension.

They are also shown how to improve their study skills by organizing their material for understanding, for accurate recall, and for presentation in examinations, essays and seminars. Efficient listening and note-taking are also discussed.

Students will be assigned essay topics provided by various departments in learning these skills and in being introduced to the research procedures of the library.

During the term Dr. Martin also supervises two six-week-long self-improvement programs for interested students. Besides reading and studying skills, the students are instructed in the management of worries and anxieties brought on by campus and personal pressures.

"For some people the results are miraculous," Dr. Martin said.

The Reading and Study Skills Centre is part of UVic's Counselling Centre in the Clearihue Building.

The Centre provides year-round counsel-

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ling in personal problems, vocational possibilities, and in the over-all development of the person.

Dr. Martin will be assisted by Mrs. Muriel Andrews during the Transition Programme.

ORAL EXAMINATION

Members of the Faculty of Graduate Studies are invited to attend the oral examination of Mrs. Margaret Jean Dempsey for her M.A. thesis in Psychology of "Memory Changes in Electroconvulsive Shock Therapy (ECT) Patients" at 10 a.m., August 23 in Room 193, Cornett Building.

This is a rare moment of relaxation for these members of the staff of the University of Victoria's new School of Public Administration. School Director Dr. G. Neil Perry said candidate response has been overwhelming, and the school opens for the first time this fall, enrolment will be more than 60 — twice original expectations. Posing over the School symbol are, from left, Dianne Olsen, Stenographer, Sonia Croucher, Secretary, and Dr. Tom Lambe, Associate Professor from the University of Southern California.



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